

EASEMENT REFUGES IN DISTRICT 4ACLEARWATER LAKE NATIONAL WILDLIFE REFUGE.I. GENERAL.

This area was visited on April 30, at which time the ice was out of the lake and all run-off had occurred. This lake is spring-fed and water levels should remain satisfactory during the coming summer.

II. WILDLIFE.

There were an estimated 225 ducks present on the lake at the time of the visit. The major species represented was Lesser Scaup followed by Mallards and Pintails with a fair representation of all other common species.

Also observed were ten Horned Grebes.

One trapping permit was issued to a local trapper during the State Trapping Season. The following animals were removed by the trapper during the season; 87 Muskrats, ~~nine~~ Mink, six Weasels, 13 Skunks, and three Badgers.

III. PHYSICAL DEVELOPMENTS.

There are no water control structures at this easement. All refuge signs and markers have been shot up and will be replaced later in the summer.

SHELL LAKE NATIONAL WILDLIFE REFUGE.I. GENERAL.

This easement was also visited on April 30. The ice was out of the lake and the major run-off had occurred. Water levels are about the same as one year ago and should remain satisfactory during the summer.

II. WILDLIFE.

There were an estimated 200 birds present on Shell Lake at the time of the visit. Lesser Scaup were the major species present but there was a good showing of Mallards and Pintails.

Lands in this area are farmed to the edge of the lake and upland game birds are seldom observed.

Also observed were Willets, and one Great Blue Heron.

III. PHYSICAL DEVELOPMENTS.

There are no water control structures at this easement. Some time is needed to replace numerous shot up refuge signs and markers.

LAKE ZAHL NATIONAL WILDLIFE REFUGE.

I. GENERAL.

This area was visited on March 20 and again on April 30. The lake was still frozen over during the visit on March 20, but was ice free on April 30 and all run-off had occurred. Water levels are low in this lake with the present level about eleven inches below spillway crest.

II. WILDLIFE.

There were approximately 700 ducks present on April 30, of which fifty percent were Lesser Scaup. All other common species were present with the exception of Gadwall, Baldpate, and Green-winged Teal.

Also observed were Dowitchers, Marbled Godwits, and Willetts.

A colony of beaver have built a large lodge in the center of the dike at this easement. The only trees for miles around were growing on the dike and the beaver have removed all except those around which the lodge is built.

III. Three trapping permits were issued to local land-owners during the State Trapping Season and the total numbers of animals removed were 535 Muskrats, 28 Mink, two Weasel, and one Skunk.

III. PHYSICAL DEVELOPMENTS.

The dike at this easement needs some repair work and we hope to accomplish this job in the next Fiscal Year.

The Government has purchased an additional 745 acres at Lake Zahl which will require some fencing in the next Fiscal Year.

Building up washed out dike with D-4

Job completed; rip-rap placed; waiting for run-off

After run-off; approximately 18" of water held back



Refuge trail overgrown by willow.

Same view after clearing brush from trail.

Sharp-tailed Grouse flushed from waste grain at headquarters.



Knudson Barn before dismantling.

First step - ends knocked out, eaves sawed off.

Roof was cut in 83ft. sections and loaded on truck.



All down but one wall.

Complete building loaded and ready for transfer to Lake Ilo.

Trespass cattle in heavy stand of Quack Grass.



One of the many dry potholes.

Beaver lodge in Iverson Lake on north end of refuge.

One of our new wooden recognition signs.



Long-tailed Weasel trapped in cellar window well,
Quarters #1.

He ran up the window screen and tried to jump out - did not succeed.

Chow time for "Porky".



Beaver lodge in dike at Lake Zahl Easement.

Close up of same beaver lodge.

Overall view of Lake Zahl Refuge from the Southwest.



REFUGE Lestwood

WATERFOWL

MONTHS OF January to April, 19 53

35012

(1) Species	(2) First Migrants Seen		(3) Peak Concentration		(4) Last Migrants Seen		(5) Young Produced		(6) Estimated Waterfowl Days
Common Name	Number	Date	Number	Inclusive Dates	Number	Date	Broods Seen	Estimated Total	
1. <u>Swans:</u>									
Whistling swan	2	4/25	2	4/25-28	2	4/28			8
2. <u>Geese:</u>									
Canada goose	44	3/27			50	4/13			116
Cackling goose									
Brant									
White-fronted goose	150	4/22			600	4/23			750
Snow goose									
Blue goose									
3. <u>Ducks:</u>									
Mallard	25	3/20	700	4/20-30					12,900
Black Duck									
Gadwall	2	4/28	50	4/30					125
Baldpate	4	4/23	150	4/30					1,450
Pintail	9	3/20	500	4/24-30					9,500
Green-winged teal	3	4/21	15	4/30					420
Blue-winged teal	12	4/30	12	4/30					12
Cinnamon teal									
Shoveller	2	3/31	150	4/24-30					2,425
Wood duck									
Redhead	11	4/23	150	4/28-30					1,050
Ring-necked duck									
Canvas-back	6	4/25	150	4/30					750
Scaup	8	3/31	350	4/28-30					5,950
Golden-eye									
Buffle-head	1	4/28	4	4/30					12
Ruddy duck									
4. <u>Coot:</u>	7	4/30	7	4/30					7

(VNR 1923)

SUMMARIES

Total Production:

Geese _____

Ducks _____

Coots _____

Total waterfowl days use during period 33,475Peak waterfowl numbers 2,438Areas used by concentrations All open water areas.

Principal nesting areas this season _____

No. of inventories this period 6 % of refuge covered 75%

Reported by _____

John R. Frye

INSTRUCTIONS (See Sec. 7532, Wildlife Refuges Field Manual)

(1) Species:

In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.

(2) First Seen:

The first refuge record for the species during the reporting period, and the number seen. This column does not apply to resident species.

(3) Peak Concentration:

Estimated number and inclusive dates when peak population of the species occurred.

(4) Last Seen:

The last refuge record for the species during the reporting period.

(5) Young Produced:

Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.

(6) Total:

Estimated waterfowl days use (average population X no. of days present) of refuge for reporting period based. (See Sec. 7532, Wildlife Refuges Field Manual.)

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

(1) Species	(2) First Migrants Seen		(3) Peak Concentration		(4) Last Migrants Seen		(5) Young Produced		(6)
Common Name	Number	Date	Number	Inclusive Dates	Number	Date	Broods Seen	Estimated Total	Estimated Waterfowl Days
1. <u>Swans:</u>									
Whistling swan									
2. <u>Geese:</u>									
Canada goose									
Cackling goose									
Brant									
White-fronted goose									
Snow goose									
Blue goose									
3. <u>Ducks:</u>									
Mallard			53	4/30					400
Black Duck									
Gadwall									
Baldpate									
Pintail			41	4/30					350
Green-winged teal			4	4/30					50
Blue-winged teal			14	4/30					125
Cinnamon teal									
Shoveller			11	4/30					90
Wood duck									
Redhead									
Ring-necked duck									
Canvas-back			16	4/30					150
Scaup			82	4/30					700
Golden-eye									
Buffle-head			4	4/30					50
Ruddy duck									
4. <u>Coot:</u>									

SUMMARIES

FORM W-1

Total Production:

Geese _____

Total waterfowl days use during period 1,915

Ducks _____

Peak waterfowl numbers 225

Coots _____

Areas used by concentrations All open water areas.

Principal nesting areas this season _____

No. of inventories this period 1 % of refuge covered 100%Reported by John R. Frye

INSTRUCTIONS (See Sec. 7532, Wildlife Refuges Field Manual)

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.
- (2) First Seen: The first refuge record for the species during the reporting period, and the number seen. This column does not apply to resident species.
- (3) Peak Concentration: Estimated number and inclusive dates when peak population of the species occurred.
- (4) Last Seen: The last refuge record for the species during the reporting period.
- (5) Young Produced: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (6) Total: Estimated waterfowl days use (average population X no. of days present) of refuge for reporting period based. (See Sec. 7532, Wildlife Refuges Field Manual.)

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

WATERFOWL
 REFUGE Shell (McAlmond) Lake Easement Refuge MONTHS OF January to April, 1953

(1) Species	(2) First Migrants Seen		(3) Peak Concentration		(4) Last Migrants Seen		(5) Young Produced		(6)
Common Name	Number	Date	Number	Inclusive Dates	Number	Date	Broods Seen	Estimated Total	Estimated Waterfowl Days
1. <u>Swans:</u>									
(2) Whistling swan									
2. <u>Geese:</u>									
(4) Canada goose									
(2) Cackling goose									
(3) Brant									
(3) White-fronted goose									
(5) Snow goose									
(5) Blue goose									
3. <u>Ducks:</u>									
(7) Mallard			10	4/30					100
(7) Black Duck			5	4/30					50
(7) Gadwall			50	4/30					350
(7) Baldpate									
(7) Pintail			15	4/30					15
(7) Green-winged teal									
(7) Blue-winged teal									
(7) Cinnamon teal									
(7) Shoveller									
(7) Wood duck									
(7) Redhead									
(7) Ring-necked duck									
(7) Canvas-back			10	4/30					70
(7) Scaup			100	4/30					700
(7) Golden-eye									
(7) Buffle-head									
(7) Ruddy duck									
4. <u>Coot:</u>									

Total Production:

Geese _____

Ducks _____

Coots _____

Total waterfowl days use during period 1,286Peak waterfowl numbers 190Areas used by concentrations All open water areas on Shell Lake.

Principal nesting areas this season _____

No. of inventories this period 1 % of refuge covered 50%Reported by John R. Frye

INSTRUCTIONS (See Sec. 7532, Wildlife Refuges Field Manual)

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.
- (2) First Seen: The first refuge record for the species during the reporting period, and the number seen. This column does not apply to resident species.
- (3) Peak Concentration: Estimated number and inclusive dates when peak population of the species occurred.
- (4) Last Seen: The last refuge record for the species during the reporting period.
- (5) Young Produced: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (6) Total: Estimated waterfowl days use (average population X no. of days present) of refuge for reporting period based. (See Sec. 7532, Wildlife Refuges Field Manual.)

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

REFUGE Lake Zuhl Easement Refuge

WATERFOWL

MONTHS OF January to April, 19 55

28072

(1) Species	(2) First Migrants Seen		(3) Peak Concentration		(4) Last Migrants Seen		(5) Young Produced		(6)
Common Name	Number	Date	Number	Inclusive Dates	Number	Date	Broods Seen	Estimated Total	Estimated Waterfowl Days
1. <u>Swans:</u>									
Whistling swan									
2. <u>Geese:</u>									
Canada goose									
Cackling goose									
Brant									
White-fronted goose									
Snow goose									
Blue goose									
3. <u>Ducks:</u>									
Mallard	25	3/20	140	4/30					800
Black Duck									
Gadwall									
Baldpate									
Pintail	9	3/20	100	4/30					600
Green-winged teal									
Blue-winged teal			5	4/30					5
Cinnamon teal									
Shoveller			70	4/30					400
Wood duck									
Redhead			50	4/30					500
Ring-necked duck									
Canvas-back			50	4/30					300
Scaup			350	4/30					2,000
Golden-eye									
Buffle-head									
Ruddy duck									
4. <u>Coot:</u>									

SUMMARIES

FORM 10-7

Total Production:

Geese _____

Total waterfowl days use during period 4,405

Ducks _____

Peak waterfowl numbers 765

Coots _____

Areas used by concentrations All open water areas.

Principal nesting areas this season _____

No. of inventories this period 2 % of refuge covered 50%Reported by John R. Frye

INSTRUCTIONS (See Sec. 7532, Wildlife Refuges Field Manual)

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.
- (2) First Seen: The first refuge record for the species during the reporting period, and the number seen. This column does not apply to resident species.
- (3) Peak Concentration: Estimated number and inclusive dates when peak population of the species occurred.
- (4) Last Seen: The last refuge record for the species during the reporting period.
- (5) Young Produced: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (6) Total: Estimated waterfowl days use (average population X no. of days present) of refuge for reporting period based. (See Sec. 7532, Wildlife Refuges Field Manual.)

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

3-1751

Form NR-1A
(Nov. 1945)MIGRATORY BIRDS
(Other than waterfowl)Refuge LostwoodMonths of January to April195 3

(1) Species	(2) First Seen		(3) Peak Numbers		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Number
I. <u>Water and Marsh Birds:</u>										
Horned Grebe	3	4/26	25	4/30						25
Eared Grebe	None observed to date.									
Pied-billed Grebe	"	"	"	"						
White Pelican	"	"	"	"						
Great Blue Heron	1	4/30	1	4/30						1
Black-crowned Night Heron	None observed to date.									
American Bittern	1	4/22	3	4/30						3
American Merganser	4	4/10	7	4/22-25	7	4/25				11
Red-breasted Merganser	2	4/25	2	4/25-26	2	4/25				2
Sandhill Crane	200	4/13	1200	4/24	800	4/25				2,000
II. <u>Shorebirds, Gulls and Terns:</u>										
Killdeer	1	4/1	50	4/30						75
Upland Plover	None observed to date.									
Willet	1	4/28	8	4/29-30						8
Greater Yellow-legs	None observed to date.									
Lesser Yellow-legs	"	"	"	"						
Baird's Sandpiper	1	4/30	1	4/30						1
Dowitcher	8	4/30	8	4/30						8
Marbled Godwit	12	4/30	12	4/30						12
Avocet	2	4/30	2	4/30						2
Wilson's Phalarope	5	4/30	5	4/30						5
Ring-billed Gull	3	4/13	500	4/25-30						500
Franklin's Gull	9	4/25	700	4/28-30						700

(over)

(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons:</u>					
Mourning dove	None observed to date.				
White-winged dove					
IV. <u>Predaceous Birds:</u>					
Golden eagle	Resident species.				5
Duck hawk	None observed to date.				
Horned owl	Resident species.				10
Magpie	Winter resident.				25
Raven	None observed.				
Crow	3 3/19	1,500	4/15-30		2,000
Cooper's Hawk	1 4/30	1	4/30		1
Swainson's Hawk	3 4/3	25	4/20-30		25
American Rough-legged Hawk	2 3/20	25	4/20-30		25
Ferruginous Rough-leg	1 3/20	3	4/30		10
Marsh Hawk	1 3/20	50	4/20-30		50
Gryfalcon	1 4/10				1
Prairie Falcon	1 4/17				1
Sparrow Hawk	1 3/29	10	4/20-30		10
Reported by				John R. Frye	

INSTRUCTIONS

- (1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiformes)
II. Shorebirds, Gulls and Terns (Charadriiformes)
III. Doves and Pigeons (Columbiformes)
IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)
- (2) First Seen: The first refuge record for the species for the season concerned.
- (3) Peak Numbers: The greatest number of the species present in a limited interval of time.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated total number of the species using the refuge during the period concerned.

Refuge LestwoodMonths of January to April, 1953

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Sharp-tailed Grouse	23,300 acres total habitat	30							750	
Pinnated Grouse	" "	2330							10	
European Partridge	" "	233							100	

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

- (1) SPECIES: Use correct common name.
- (2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

* Only columns applicable to the period covered should be used.

3-1754

Form NR-4

(June 1945)

SMALL MAMMALS

Refuge LestwoodYear ending April 30, 1953

(1) Species	(2) Density	(3) Removals	(4) Disposition of Furs							(5) (r)Total Popula- tion				
Common Name	Cover Types & Total Acreage of Habitat	Acres Per Animal	Hunting	Fur Harvest	Predator Control *	For Re- stocking	For Re- search	Share Trapping			Total Refuge Furs Shipped	Furs Donated	Furs Destroyed	(s)
								Permit Number	Trappers Share	Refuge share				
Muskrat	6,500 acres marsh	8		140				*	70	70	70			820
Mink	"	130		14				*	7	7	7			50
Weasel	21,000 acres upland	700		1				*	1	0	0			30
Skunk	"	140												150
Badger	"	350												60
Peregrine	"	140												150
Coyote	"	10,000												2
Fox	"	2,100												10
Ground Squirrels	"													Common
Cottontail Rabbit	"	450												50
Snowshoe Rabbit	"	450												50
Jack Rabbit	"	140												150
Raccoon	"	2,100												10
Beaver	No beaver habitat.	0		5				T-7978	3	2	2			3

* List removals by Predator Animal Hunter

* List removals by Predator Animal Hunter

REMARKS:

* Share trapping was carried on under Trapping Permits No. T-7977, T-7978, and T-7979.

Reported by

John R. Frye

INSTRUCTIONS

Form NR-4 - **SMALL MAMMALS** (Include data on all species of importance in the management program; i. e., muskrats, beaver, coon, mink, coyote. Data on small rodents may be omitted except for estimated total population of each species considered in control operations.)

SPECIES:		DENSITY:		REMOVALS:		DISPOSITION OF FUR:		TOTAL POPULATION:	
Use correct common name. Example: Striped skunk, spotted skunk, short-tailed weasel, gray squirrel, fox squirrel, white-tailed jackrabbit, etc. (Accepted common names in current use are found in the "Field Book of North American Mammals" by H. E. Anthony and the "Manual of the Vertebrate Animals of the Northeastern United States" by David Starr Jordan.)		Applies particularly to those species considered in removal programs. Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottom land hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.		Indicate the total number under each category removed since April 30 of the previous year, including any taken on the refuge by Service Predatory Animal Hunter. Also show any removals not falling under headings listed.		On share-trapped furs list the permit number, trapper's share, and refuge share. Indicate the number of pelts shipped to market, including furs taken by Service personnel. Total number of pelts of each species destroyed because of unprimeness or damaged condition, and furs donated to institutions or other agencies should be shown in the column provided.		Estimated total population of each species reported on as of April 30.	
REMARKS:								Indicate inventory method(s) used, size of sample area(s), introductions, and any other pertinent information not specifically requested.	

3-1754
Form NR-4
(June 1945)

SMALL MAMMALS

Refuge District 4A Easement Refuges

Year ending April 30, 1953

(1) Species	(2) Density	(3) Removals					(4) (a) (i) Not Disposition of Furs					(5) Total Popula- tion	
Common Name	Cover Types & Total Acres Per Animal	Hunting	Fur Harvest	Predator Control	For Re- stocking	For Re- search	Share Trapping			Total Refuge Furs Shipped	Furs Donated	Furs Destroyed	(S)
							Permit Number	Trappers Share	Refuge share				
<u>Lake Zahl National Wildlife Refuge</u>													
Muskrat			585						5-52				100
Mink			28						28				25
Weasel			2						2				10
Skunk			1						1				20
Badger													20
<u>Shell Lake National Wildlife Refuge</u>													
Muskrat													30
Mink													15
Weasel													8
Skunk													10
<u>Clearwater Lake National Wildlife Refuge</u>													
Muskrat			87				8-52	87					50
Mink			9				8-52	9					10
Weasel			6				8-52	6					5
Skunk			13				8-52	13					20
Badger			3				8-52	3					10
* List removals by Predator Animal Hunter													

* List removals by Predator Animal Hunter

REMARKS:

Trapping at Lake Zahl was accomplished under Refuge Permits No. 4-52, 5-52, and 9-52.

Reported by John R. Frye

INSTRUCTIONS

Form NR-4 - SMALL MAMMALS (Include data on all species of importance in the management program; i. e., muskrats, beaver, coon, mink, coyote. Data on small rodents may be omitted except for estimated total population of each species considered in control operations.)

SPECIES:		DENSITY:		REMOVALS:		DISPOSITION OF FUR:		TOTAL POPULATION:	
<p>Use correct common name. Example: Striped skunk, spotted skunk, short-tailed weasel, gray squirrel, fox squirrel, white-tailed jackrabbit, etc. (Accepted common names in current use are found in the "Field Book of North American Mammals" by H. E. Anthony and the "Manual of the Vertebrate Animals of the Northeastern United States" by David Starr Jordan.)</p>		<p>Applies particularly to those species considered in removal programs. Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottom land hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.</p>		<p>Indicate the total number under each category removed since April 30 of the previous year, including any taken on the refuge by Service Predatory Animal Hunter. Also show any removals not falling under headings listed.</p>		<p>On share-trapped furs list the permit number, trapper's share, and refuge share. Indicate the number of pelts shipped to market, including furs taken by Service personnel. Total number of pelts of each species destroyed because of unprimeness or damaged condition, and furs donated to institutions or other agencies should be shown in the column provided.</p>		<p>Estimated total population of each species reported on as of April 30.</p>	
<p>REMARKS:</p>		<p>Indicate inventory method(s) used, size of sample area(s), introductions, and any other pertinent information not specifically requested.</p>							

3-1570
NR-8a

REFUGE GRAIN REPORT

Refuge.....

Months of January thru April 1953

(1) VARIETY	(2) ON HAND BEGINNING OF PERIOD	(3) RECEIVED DURING PERIOD	(4) TOTAL	(5) GRAIN DISPOSED OF				(6) ON HAND END OF PERIOD	(7) PROPOSED USE		
				TRANS- FERRED	SEEDED	FED	TOTAL		SEED	FEED	SURP.
Wheat	390	0	390	0	0	20	20	370		370	
Buckwheat	10	0	10	10	0	0	10	0			
Sweet Clover Seed	600#	0	600#	0	0	0	0	600#	600#		
Bromo Grass Seed	11,240#	0	11,240#	0	0	0	0	11,240#	11,240#		

(8) Indicate shipping or collection points.....

(9) Grain is stored at Refuge Headquarters......

(10) Remarks.....

NR-8a REFUGE GRAIN REPORT

This report should cover all grain on hand, received, or disposed of, during the period covered by this narrative report.

Report all grain in bushels. For the purpose of this report the following approximate weights of grain shall be considered equivalent to a bushel: Corn (shelled)—55 lbs., Corn (ear)—70 lbs., Wheat—60 lbs., Barley—50 lbs., Rye—55 lbs., Oats—30 lbs., Soy Beans—60 lbs., Millet—50 lbs., Cowpeas—60 lbs., and Mixed—50 lbs. In computing volume of granaries, multiply the cubic contents (cu. ft.) by 0.8 bushels.

- (1) List each type of grain separately: Corn, wheat, proso millet, etc. Include only domestic grains; aquatic and other seeds will be listed on NR-9.
- (3) Report all grain received during period from all sources, such as transfer, share-cropping, or harvest from food patches.
- (4) A total of Columns 2 and 3.
- (6) Column 4 less Column 5.
- (7) This is a proposed breakdown by varieties of grain listed in Column 6.
- (8) Nearest railroad station for shipping and receiving.
- (9) Where stored on refuge: "Headquarters grainary", etc.
- (10) Indicate here the source of grain shipped in, destination of grain transferred, data on condition of grain, unusual uses proposed.

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LAKE ILO REFUGE.

I. GENERAL

A. Weather Conditions.

Total precipitation for the period at Lake Ilo was above normal. Only the month of March had less than normal precipitation. Early April was dry and we had every indication of a pending drouth; however, over three inches of moisture fell in the latter part of the month and brightened the picture considerably.

The winter as a whole was very mild with the coldest weather occurring in March, and that lasted for only a few days. Very little snow stayed on the ground during the winter; roads were open at all times.

Farming prospects are much more favorable than last spring when no moisture fell during April. This April was colder than normal which delayed farming to some extent; the high precipitation the latter part of the month also delayed farm operations.

Weather data for the period were as follows:

<u>Month</u>	<u>Precipitation</u>	<u>Snowfall</u>	<u>Max.Temp.</u>	<u>Min.Temp.</u>
January	.38	6.3	50	-21
February	.33	2.0	48	- 8
March	1.15	10.0	60	-25
April	3.74	6.0	76	6
Total	5.60	24.3"	Extremes 76	-25

B. Water Conditions.

The ice level was 26 inches below spillway crest on January 1 and remained that way until March 18 when the run-off started. Run-off was very slight and the lake level raised only four inches to 22" below spillway crest.

The following table shows the water level in relation to spillway crest on various dates.

March 18	-	26	inches below spillway crest
March 19	-	22	" " " "
March 21	-	18	" " " "
March 23	-	12	" " " "
March 29	-	9	" " " "
April 27	-	7	" " " "
April 30	-	6	" " " "

It is believed that the rain and snow that has fallen the 29 and 30 of April will raise the water so that a small amount will flow over the spillway. This spring has been the first one in which the water did not go over the spill during run-off since it was constructed. Normally water from two to four feet deep goes over.

The ice was 15 inches thick at the beginning of the period and on February 2 it was 20 inches thick; it remained about the same the rest of the winter. A hole was kept open by wintering Mallards and during warm periods wind action would open it larger. It was measured on February 28 and found to be 1/2 mile long and 600 feet wide. All of the ice disappeared from the lake on March 30; this is the earliest that the ice has melted on the lake.

The Lee Paul slough is practically dry this spring as no water entered it through the diversion ditch; it is believed the water level will raise enough to fill it in the next few days due to recent precipitation.

The water appears to be in very good condition even though there was no run-off over the spillway. No fish were lost this winter and the water is very clear, more so than if there had been a large run-off.

C. Fires. None.

II. WILDLIFE

A. Migratory Birds.

Approximately 450 Mallards wintered on the refuge this winter. Local fishermen seemed to think this is what kept the fish from dying as they kept the water open! (Other local people that did not care to fish thought it was a shame to let them stay here.) It is believed that the winter loss in the ducks wintering here was very small. Only one duck was found dead near open water and it was believed to have died of lead poisoning. It is believed that no one molested the ducks this winter as there were no complaints of them doing any damage, in fact, there were very few crops such as corn left standing that could have suffered. The field of corn that was left standing on the refuge was completely eaten by them during the winter months.

The first spring migrants appeared on March 17 when nine Pintails and two Green-winged teal were seen. The Mallards began to increase in the next few days. The migration appeared to be larger than average this spring, especially in diving ducks and geese. 66 Canada Geese were observed on the refuge near headquarters on March 18 and several flocks were seen during the next two weeks. More Snow geese used the refuge than usual. A flock of 2000 used the area from April 11 to April 19; only 12 Blue geese were counted in this flock. A flock of 200 Snow geese were on refuge from April 22 to 26. The first White-fronted geese (200) were seen on April 11.

72 White Pelicans were seen on April 24.

A very large migration of Sandhill Cranes occurred in this vicinity. It is believed there were more than ever observed in the past. Several thousand stopped for a short period on the refuge - a flock of approximately 4000 were observed feeding in a refuge barley field on April 5. 600 were present on April 22.

The shore bird migration has been slow. Franklin's, Ring-billed and Herring gulls have been seen.

B. Upland Game Birds.

It is estimated that 75 Ring-necked pheasants are using the refuge this spring - approximately the same number as at the end of December. It is believed that there was no winter loss in western North Dakota this winter, but their numbers are still much lower than in the past. It is estimated that the pheasant population is less than 50 percent of that of last spring.

Very few Sharp-tailed Grouse have been observed on the refuge or in the nearby vicinity; it is estimated that 15 are using the refuge. Very few Hungarian Partridge have been observed on the refuge or in the vicinity; probably no more than 10 are present.

C. Big Game Animals.

None have been observed on the refuge during the period.

D. Fur Animals, Predators, Rodents, and other Mammals.

One permit was issued to trap fur-bearing animals on the refuge. 16 mink and 46 muskrats were trapped and divided on a 50-50 basis; five rats were destroyed by mink in traps. Also trapped were one weasel, one raccoon and nine skunk.

Beaver: Two beaver were trapped near the refuge this winter. Two were destroyed on the refuge last fall that were doing damage to trees in the Lake Ilo Park. No beaver have been observed on the refuge this spring.

Weasel: One weasel was trapped; a few are using the refuge but their population is low.

Skunk: Very few skunks or signs have been observed on the refuge this spring. 71 were trapped and shot on the refuge from July 14, 1952 to April 30, 1953. Skunks are very numerous in the surrounding area however.

Fox and Coyote: No coyotes have been seen on the refuge, or in vicinity, this period. It is believed their number is very small in

this area. One fox has been seen on refuge during the period and several have been reported in the nearby vicinity. It is believed the fox population is on the increase in this area.

E. Predacious Birds, including Crows, Ravens, Magpies.

A few Golden Eagles were seen on the refuge this period, but their numbers appeared to be below normal. One Bald Eagle was observed; they are seldom seen in this area. A few Prairie Falcons and one Gyrfalcon were seen on the refuge during the period. A number of Marsh Hawks, Sparrow Hawks and Rough-legged Hawks also have been seen during the period.

A large number of crows used the refuge during their migration which started the latter part of March; their usual number have been present since then.

A few Magpies were seen on the refuge during the period. The Magpies are numerous in the Badlands a few miles north of the refuge. Two Horned owls used the area most of the winter. No Snowy Owls were seen during the period.

F. Fish.

Winter fishing was permitted on the refuge from December 1, 1952 to February 28, 1953. The State issued a new proclamation during the first part of December setting the opening of winter fishing Dec. 15, even though our regulations opened it on December 1 (in accordance with old State regulations). The fishermen had already been fishing for several days when the new proclamation was announced, so the State Game and Fish Department was contacted; we were informed to continue as originally scheduled, especially since perch fishing was the only fishing to be permitted on Ile anyway.

It was estimated that 2,000 man days of fishing were expended and 60,000 Perch taken during the winter fishing season. A large number of Northern Pike were also caught but were put back (in most cases, anyway) as the season was not open for taking them. The Northern Pike that were caught measured in length from 15 to 28". According to the size of the Northerns that are present they must have been planted in the late spring of 1951 (the spring when the big winter kill occurred here). We had not been informed by the State of such a planting, nor had we been aware that plans even existed. This was similar to the circumstances of plantings made in 1952.

III. REFUGE DEVELOPMENT - MAINTENANCE

A. Physical Developments.

The following maintenance and construction projects were completed during the period.

1. Completed mounting snow plow on Diamond T truck and hauled it back from Des Laos.
2. Pushed snow and weeds off refuge roads.
3. Finished inside of office with masonite and installed three new windows and window casing (Job 80 percent complete).
4. Posted invitations to bid on Stewart Lake spillway repair Job; Distributed specifications and plans.
5. Finished inside of garage with salvaged insulite (80 percent completed).
6. Surveyed land tracts 7 and 12 on Lake Ilo Refuge for fencing and posting.
7. Hauled coal for heating garage and office at Lake Ilo headquarters (hauled ashes away).
8. Trapped and banded 114 ducks from March 8 to 24, 1953 - 104 Mallards and 10 Pintail.
9. Disassembled building (18 by 32') at Lostwood Refuge and hauled it to Lake Ilo Refuge -for use for garage and storage.
10. Hauled F-30 tractor from Des Laos Refuge to Lostwood Refuge.
11. Dug up under-ground gasoline storage tank, had it repaired and installed it in new location (after applying two coats of "Rustrum").
12. Layed out contouring on farming unit AU-4.
13. Worked land for seeding grass and planted 15 acres of grass, clover and alfalfa.
14. Made two trips to Stewart Lake Refuge in regards to spillway repair - made trip to Des Laos for grass seed.
15. Made minor repairs on IHC Pickup #I-16949, Diamond T truck #I-16956 and F-30 tractor I-16834.
16. Cultivated trees at headquarters and in Lake Ilo Park. Plowed four acres of new ground for trees at headquarters.
17. Repaired refuge boundary fence; checked dam and spillway, water levels and observed birds.
18. Checked and divided furs trapped on refuge.

B. Plantings.

Planted 15 acres of grass, clover and alfalfa on SW $\frac{1}{4}$ of Sec. 54.

Permit No. 81 - Charles Schollmeyer, (55 acres), half of the land will be summer fallowed; other half will be planted to barley and wheat (some corn may be planted on contoured strip instead of summer fallow). All of land has been worked but not seeded to date.

Permit No. 82 - Tom Donahoe, 45 acres barley, wheat and corn. Land worked to start weeds but not seeded to date. 1/2 to 1/3 of land will be summer fallowed. 10 acres of land will be seeded back to grass and clover.

IV. ECONOMIC USES

A. Grazing. None this period.

B. Haying. None this period.

C. Fur Harvest.

A trapping permit was issued to Mr. A. B. Rosendahl of Dunn Center, North Dakota for the taking of Mink, Muskrat, Skunk, Raccoon and Weasel. The mink, muskrat and weasel pelts were shared on a 50-50 basis, others all taken by trapper. The total take was 16 mink, one weasel, one raccoon, 46 muskrats and nine skunk. The trapper sold his share of mink for \$200.00 and his muskrats for \$28.50. Five of the skunks were sold by the trapper for 50 cents each; the other four were not worth marketing. The Government received \$14.23 for the 22 muskrats and approximately \$168.00 for the 8 mink that were sold to the New York Fur Auction Co, Minneapolis, Minn.

V. FIELD INVESTIGATION OR APPLIED RESEARCH

A. Bird Banding.

114 ducks were banded from March 8 to 24. 104 of these ducks were Mallards, the other 10 were Pintails that were trapped during spring migration.

VI. PUBLIC RELATIONS

A. Public Uses.

1. Hunting. None.

2. Fishing. An estimated 2,000 man-days winter fishing, approximately 60,000 perch taken.

3. Miscellaneous Use. The Lake Ilo Recreational Area maintained under cooperative agreement by Dunn County has not been used so far this spring. Those trees have been cultivated that are planted in rows. The rest of the trees are to be cultivated later and more are to be planted (Spruce and Cedar).

DISTRICT IV. EASEMENTS

HIDDENWOOD

I. GENERAL.

Precipitation was near normal during the period (normal to below during January, February and March, above normal in April). The water level is still above normal due to a plug in the culvert under the highway. The water level was 0.8 feet below the top of the culvert when the area was checked on April 19. The plug in the culvert, placed there by local "sportsmen", has been discussed with the County highway engineer but no action has been taken as yet.

II. WILDLIFE.

One trapping permit was issued to a local farmer but no report has been received to date.

The area was visited on March 20 and the lake was covered with ice. On April 19 most of the lake was still frozen over but a few birds were seen - 16 Green-winged Teal, two Shovellers, 30 Mallards and 26 Pintail.

Although none were actually observed it is believed that a few Pheasants, Sharp-tails and Huns are using the area.

III. PHYSICAL DEVELOPMENTS.

1. Observed birds and checked water levels.

LAKE PATRICIA

Not visited during the period.

LEGION LAKE

I. GENERAL.

Precipitation was normal to below normal during January, February and March, above normal during the latter part of April. Very little snow occurred during the period.

At the beginning of the period the water level was 18 inches below spillway crest. On March 20 a small stream was going over the spillway and on April 18 the water was just at spillway crest.

II. WILDLIFE.

It is believed the usual number of birds used the area during the spring migration. The area was visited on March 20 and on April 18, the following birds were seen: 3/20 - 90 Pintail & 4 Mallard. 4/18 - 2500 ducks (mainly Mallards & Pintails) and 30 White-fronted geese.

The usual number of Sharp-tails, Huns and Pheasants probably used the area. None were observed on the refuge when visited but a number were observed in the vicinity.

A trapping permit was issued to a local farm boy; no report received to date.

III. PHYSICAL DEVELOPMENTS.

1. Structures were inspected and water levels checked.
2. Birds were observed on 3/20 and 4/18.

McLEAN

I. GENERAL.

Precipitation below to near normal during January, February and March and believed above normal during the latter part of April. The water level was 16" below spillway crest at the beginning of the period and two inches were flowing over on March 20; only a small trickle was going over on April 19.

The spillways were checked and appeared to be in good condition. A small amount of wash had occurred on dam; this will be repaired this summer. There were also a few sunken places in the dam that will need repair.

II. WILDLIFE.

Two trapping permits were issued to local farmers and 90 muskrats and one mink were trapped. The muskrat population is believed to be high for the area. It also appears that there are several mink present.

It is believed more ducks used the area this spring than last spring. When visited on April 19, 8,000 ducks were observed: 50 percent Pintail, 40 percent Mallards, 10 percent Canvasback and Scaup (a scattering of Baldpate, Gadwall, Blue-winged Teal and Green-winged Teal).

III. PHYSICAL DEVELOPMENTS.

1. Structures and water levels checked on 3/20 and 4/19.
2. Birds were observed on April 19.

PRETTY ROCK

I. GENERAL.

The snowfall was below normal this winter and very little run-off occurred. The snow was all gone when the area was visited on March 17 and the water level appeared to be the same as the time of freeze-up (one foot below spillway crest). The area has not been visited since March 17, but, it is believed that the water level should have risen to spill crest during the latter part of April as approximately two inches of rain fell in this locality.

Structures were checked on March 17 and appeared to be in good condition.

II. WILDLIFE.

The area was not visited during the spring migration. On March 17 no ducks were present on the area. A number of Pheasants were observed on the refuge and it is estimated that 75 are using the area

(this is much less than in the past). It is believed a few Sharp-tails and Huns are also present.

Two trapping permits were issued but no reports as to number taken have been received. When the area was visited during the early part of the trapping season the trappers had taken 32 muskrats and 2 mink.

A number of skunk and mink are believed to be using the area. It is also believed the muskrat population is larger than usual.

III. PHYSICAL DEVELOPMENTS.

1. Structures and water level checked on March 17. Trappers were not contacted as they were not at home.

STEWART LAKE

I. GENERAL.

Precipitation ranged from near normal to below normal during the period January - March. Early April was very dry but over 2.5 inches of rain fell during the last few days of the month.

The water level was three feet below spillway crest at the beginning of the period and 2.5 feet on April 28 - only a six-inch raise during the spring run-off (normally the 85-foot spillway runs water from one to two feet deep).

II. WILDLIFE.

It is believed that fewer waterfowl used the area this period than usually do. On March 17 no ducks were present and most of the area still had an ice cover.

On April 14 an estimated 1800 ducks were present - 25 percent Mallards, 20 percent Pintails, 20 percent Scaup, 10 percent Shovellers, 10 percent Blue-winged Teal and 15 percent Green-winged Teal, Canvas-back, Baldpate and Gadwall.

On April 18 only an estimated 300 ducks were observed, mainly Mallards and Pintails.

The area was visited again on April 28 and only 12 ducks were observed.

It is believed that more Pheasants are using the area this spring than last spring but their number is still small compared with the past. Five hens were seen on the refuge on April 14 and a number were observed in the vicinity on April 28. No Sharp-tails or Huns were observed during the period but it is believed that a few are present.

Two trapping permits were issued to local fama boys but no reports have been received. The muskrat population is very low on this area. It is believed a few coyotes used the area as a few are present in the vicinity. Jack Rabbits are numerous in this locality.

III. PHYSICAL DEVELOPMENTS.

A contract has been awarded to repair the spillway at this easement. A new reinforced concrete out-off wall is to be put in and the rock spillway will be repaired with new riprap and gravel. The Rue Construction Company of Bismarek, North Dakota was low bidder at \$6275.00.

The contractor started moving in equipment on April 27 and started actual work on the 28. Dirt and rock were excavated to grade for the out-off wall before the heavy rains of April 29 and 30 temporarily suspended activities.

Mr. Dinkins has been assigned to this project as resident inspector and will supervise the work in that capacity.

This easement was visited on March 17, April 14 and 18 to check water levels and to determine working conditions prior to the issuance of a commence-work-order to the contractor.

On April 28 Messrs. Johnston and Wright of the Branch of Engineering and Messrs. Dinkins and Huenecke visited the area for the purpose of setting grade stakes and discussing the work with the contractor.

WHITE LAKE

I. GENERAL.

The precipitation and snowfall conditions are the same as indicated for Stewart Lake (these two refuges are in the same general locality). There was the least run-off this spring of any since the refuge was established. The water level was $3\frac{1}{2}$ feet below spillway at the beginning of the period and 3' below spillway crest after the spring run-off. It is believed the water level raised a few inches during the rain the latter part of April (the area has not been visited since the rain).

The structures were checked and appeared to be in good condition with the exception of a small amount of wash on dike (this will be repaired this summer). A new fence is to be constructed around the dike this spring.

II. WILDLIFE.

On April 14 an estimated 1,000 ducks were observed on the area; these were Mallards, Pintails, Redheads, Canvasbacks, Blue-wings, Green-wings and Shovellers. About 200 Franklin's Gulls were also observed.

The area was visited again late in the evening on April 18 and only a few ducks were observed.

No Pheasants, Sharp-tails or Huns were observed on the area this period.

One trapping permit was issued to a farmer living on refuge but he did not catch anything. Eight skunks were killed by this farmer near his buildings.

III. PHYSICAL DEVELOPMENTS.

1. Structures and water levels checked.
2. Proposed fence around dike was layed out and the farmer on the refuge was contacted in regards to building fence.
3. Birds were observed.

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NOTE: The above report on Lake Ilo and District IV Easements was based mainly on information submitted by Mr. Chesley M. Dinkins, Maintenance Man in charge at Ilo; some data were supplied by the refuge manager.

WATERFOWL

 Refuge Lake Umbagog Months of January to April 1955

(1) Species	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Young Produced		(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated Waterfowl Use-days
I. <u>Swans:</u>									
Whistling swan									
II. <u>Geese:</u>									
Canada goose			168	5/12-23					1,500
Cackling goose									
Brant									
White-fronted goose	200	4/5	300	4/12-18					3,750
Snow goose	1000	4/5	2000	4/12-26					27,000
Blue goose	18	4/5	12	4/12-25					280
III. <u>Ducks:</u>									
Mallard	450	1/1/53	6000	4/12-18					164,400
Black duck									
Cadwall			200	4/19-30					5,000
Baldpate			1200	4/12-30					33,200
Pintail	9	3/17	5000	4/5-25					104,400
Green-winged teal	2	3/17	200	4/5-18					4,050
Blue-winged teal	3	4/16	400	4/19-30					6,600
Cinnamon teal									
Shoveller	4	4/16	200	4/19-30					6,600
Wood duck									
Redhead	75	4/5	200	4/12-25					16,250
Ring-necked duck									
Canvas-back	20	4/15	1200	4/19-30					20,000
Scaup	200	3/28	4000	4/12-25					20,400
Golden-eye	13	3/28	50	3/29-4/10					640
Buffle-head	3	3/28	20	3/29-4/10					400
Ruddy duck	20	4/19	100	4/19-30					280
Am. Merganser	19	3/29	300	3/29-4/10					5,250
IV. <u>Coot:</u>	None observed.								

SUMMARIES

FORM NR-1

Dates waterfowl counts made	<u>Weekly during entire period.</u>	Total waterfowl usage during period	<u>490,470</u>
Percent of waterfowl area covered	<u>100</u>	Peak waterfowl numbers	<u>22,550</u>
Dates brood counts made		Areas used by concentrations	<u>Entire area.</u>
Percent of area covered in brood counts		Principal nesting areas this season	
Total production:			
Geese			
Ducks			
Coots		Reported by	<u>Chesley M. Dinkins</u>

INSTRUCTIONS

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.
- (2) First seen: The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.
- (3) Peak concentration: The greatest number of the species present in a limited interval of time.
- (4) Last seen: The last refuge record for the species during the season concerned in the reporting period.
- (5) Young produced: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (6) Total: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

WATERFOWL

 Refuge Hiddenwood Months of January to April 19 55

(1) Species	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Young Produced		(6) Total
	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for period
I. <u>Swans:</u>									
Whistling swan									
II. <u>Geese:</u>									
Canada goose									
Cackling goose									
Brant									
White-fronted goose									
Snow goose									
Blue goose									
III. <u>Ducks:</u>									
Mallard	80	4/19							
Black duck									
Cadwall									
Baldpate									
Pintail	26	4/19							
Green-winged teal	16	4/19							
Blue-winged teal									
Cinnamon teal									
Shoveller	2	4/19							
Wood duck									
Redhead									
Ring-necked duck									
Canvas-back									
Scaup									
Golden-eye									
Buffle-head									
Ruddy duck									
IV. <u>Coot:</u>									

NOTE: Figures shown are merely those for birds observed - areas were not visited frequently enough during this period to accurately list first arrivals, peak concentrations, etc.

SUMMARIES

Dates waterfowl counts made _____

Percent of waterfowl area covered _____

Dates brood counts made _____

Percent of area covered in brood counts _____

Total production:

Geese _____

Ducks _____

Coots _____

Total waterfowl usage during period _____

Peak waterfowl numbers _____

Areas used by concentrations _____

Principal nesting areas this season _____

Reported by _____

INSTRUCTIONS

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.
- (2) First seen: The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.
- (3) Peak concentration: The greatest number of the species present in a limited interval of time.
- (4) Last seen: The last refuge record for the species during the season concerned in the reporting period.
- (5) Young produced: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (6) Total: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

WATERFOWL

Refuge Marine Months of January to April 19 58

(1) Species	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Young Produced		(6) Total
	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for period
I. Swans:									
Whistling swan									
II. Geese:									
Canada goose									
Cackling goose									
Brant									
White-fronted goose									
Snow goose									
Blue goose									
III. Ducks:									
Mallard									
Black duck									
Cadwall									
Baldpate									
Pintail									
Green-winged teal									
Blue-winged teal									
Cinnamon teal									
Shoveller									
Wood duck									
Redhead									
Ring-necked duck									
Canvas-back									
Scaup									
Golden-eye									
Buffle-head									
Ruddy duck									
IV. Coot;									

Area not visited during period.

SUMMARIES

Dates waterfowl counts made _____

IA. Coaf:

Percent of waterfowl area covered _____

Dates brood counts made _____

Percent of area covered in brood counts _____

Total production:

Geese _____

Ducks _____

Coots _____

Total waterfowl usage during period _____

Peak waterfowl numbers _____

Areas used by concentrations _____

Principal nesting areas this season _____

Reported by _____

INSTRUCTIONS

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.
- (2) First seen: The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.
- (3) Peak concentration: The greatest number of the species present in a limited interval of time.
- (4) Last seen: The last refuge record for the species during the season concerned in the reporting period.
- (5) Young produced: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (6) Total: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

WATERFOWL

Refuge Legion Lake Months of January to April 19 53

(1) Species	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Young Produced		(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for period
I. Swans:									
Whistling swan									
II. Geese:									
Canada goose	None observed.		NOTE: Figures shown are merely those for birds observed - areas were not visited frequently enough during this period to accurately list first arrivals, peak concentrations, etc.						
Cackling goose									
Brant									
White-fronted goose	20	4/18							
Snow goose									
Blue goose									
III. Ducks:									
Mallard	1000	4/18							
Black duck									
Cadwall									
Baldpate									
Pintail	1600	4/18							
Green-winged teal									
Blue-winged teal									
Cinnamon teal									
Shoveller									
Wood duck									
Redhead									
Ring-necked duck									
Canvas-back									
Scaup									
Golden-eye									
Buffle-head									
Ruddy duck									
IV. Coot:									

SUMMARIES

Dates waterfowl counts made _____

Percent of waterfowl area covered _____

Dates brood counts made _____

Percent of area covered in brood counts _____

Total production:

Geese _____

Ducks _____

Coots _____

Total waterfowl usage during period _____

Peak waterfowl numbers _____

Areas used by concentrations _____

Principal nesting areas this season _____

Reported by _____

INSTRUCTIONS

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.
- (2) First seen: The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.
- (3) Peak concentration: The greatest number of the species present in a limited interval of time.
- (4) Last seen: The last refuge record for the species during the season concerned in the reporting period.
- (5) Young produced: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (6) Total: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

WATERFOWL

Refuge Malheur Months of January to April 19 55

(1) Species	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Young Produced		(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for period
I. <u>Swans:</u>									
Whistling swan									
II. <u>Geese:</u>									
Canada goose	None observed.		NOTE: Figures shown are merely those for birds observed - areas were not visited frequently enough during this period to accurately list first arrivals, peak concentrations, etc.						
Cackling goose									
Brant									
White-fronted goose									
Snow goose									
Blue goose									
III. <u>Ducks:</u>									
Mallard	3200	4/18							
Black duck									
Cadwall	25								
Baldpate	40								
Pintail	4000	4/18							
Green-winged teal	50								
Blue-winged teal	10								
Cinnamon teal									
Shoveller									
Wood duck									
Redhead									
Ring-necked duck									
Canvas-back	400	4/18							
Scaup	400								
Golden-eye									
Buffle-head									
Ruddy duck									
IV. <u>Coot:</u>									

SUMMARIES

Dates waterfowl counts made _____

Percent of waterfowl area covered _____

Dates brood counts made _____

Percent of area covered in brood counts _____

Total production: _____

Geese _____

Ducks _____

Coots _____

Total waterfowl usage during period _____

Peak waterfowl numbers _____

Areas used by concentrations _____

Principal nesting areas this season _____

Reported by _____

INSTRUCTIONS

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.
- (2) First seen: The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.
- (3) Peak concentration: The greatest number of the species present in a limited interval of time.
- (4) Last seen: The last refuge record for the species during the season concerned in the reporting period.
- (5) Young produced: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (6) Total: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

WATERFOWL

Refuge Rosette Hook Months of January to April 1955

(1) Species	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Young Produced		(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for period
I. <u>Swans:</u> Whistling swan									
II. <u>Geese:</u> Canada goose Cackling goose Brant White-fronted goose Snow goose Blue goose	None observed.								
III. <u>Ducks:</u> Mallard Black duck Gadwall Baldpate Pintail Green-winged teal Blue-winged teal Cinnamon teal Shoveller Wood duck Redhead Ring-necked duck Canvas-back Scaup Golden-eye Buffle-head Ruddy duck	Area not visited after main migration had started.								
IV. <u>Coot:</u>									

3-1750

20(over)23

(Sept. 1950) Interior - Duplicating Section, Washington, D.C. 82449

Form NR-1

SUMMARIES

Dates waterfowl counts made _____

Percent of waterfowl area covered _____

Dates brood counts made _____

Percent of area covered in brood counts _____

Total production:

Geese _____

Ducks _____

Coots _____

Total waterfowl usage during period _____

Peak waterfowl numbers _____

Areas used by concentrations _____

Principal nesting areas this season _____

Reported by _____

INSTRUCTIONS

(1) Species:

In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.

(2) First seen:

The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.

(3) Peak concentration:

The greatest number of the species present in a limited interval of time.

(4) Last seen:

The last refuge record for the species during the season concerned in the reporting period.

(5) Young produced:

Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.

(6) Total:

Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

WATERFOWL

Refuge Stewart Lake

Months of

January

to

April19 53

(1) Species	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Young Produced		(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for period
I. <u>Swans:</u>									
Whistling swan									
II. <u>Geese:</u>									
Canada goose	None observed.		NOTE:		Figures shown are merely those for birds observed - areas were not visited frequently enough during this period to accurately list first arrivals, peak concentrations, etc.				
Cackling goose									
Brant									
White-fronted goose									
Snow goose									
Blue goose									
III. <u>Ducks:</u>									
Mallard	500	4/14							
Black duck									
Cadwall	8	4/14							
Baldpate	50	4/14							
Pintail	400	4/14							
Green-winged teal	12	4/14							
Blue-winged teal	150	4/14							
Cinnamon teal									
Shoveller	50	4/14							
Wood duck									
Redhead	80	4/14							
Ring-necked duck									
Canvas-back	25	4/14							
Scaup	400	4/14							
Golden-eye									
Buffle-head									
Ruddy duck									
IV. <u>Coot:</u>									

3-1750

21(over)2

(Sept.1950) Interior - Duplicating Section, Washington, D.C. 82449

Form NR-1

Total waterfowl usage during period _____

Peak waterfowl numbers

Areas used by concentrations

[illegible]

Principal nesting areas this season _____

Reported by

INSTRUCTIONS

- | | |
|-------------------------|---|
| (1) Species: | In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. |
| (2) First seen: | The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species. |
| (3) Peak concentration: | The greatest number of the species present in a limited interval of time. |
| (4) Last seen: | The last refuge record for the species during the season concerned in the reporting period. |
| (5) Young produced: | Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted. |
| (6) Total: | Estimated total number of the species using the refuge <u>during the period</u> . This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement. |

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

SUMMARIES

Dates waterfowl counts made _____

Percent of waterfowl area covered _____

Dates brood counts made _____

Percent of area covered in brood counts _____

Total production: _____

Geese _____

Ducks _____

Coots _____

Total waterfowl usage during period _____

Peak waterfowl numbers _____

Areas used by concentrations _____

Principal nesting areas this season _____

Reported by _____

INSTRUCTIONS

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.
- (2) First seen: The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.
- (3) Peak concentration: The greatest number of the species present in a limited interval of time.
- (4) Last seen: The last refuge record for the species during the season concerned in the reporting period.
- (5) Young produced: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (6) Total: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

WATERFOWL

Refuge White Lake Months of January to April 19 55

(1) Species	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Young Produced		(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for period
I. <u>Swans:</u> Whistling swan									
II. <u>Geese:</u> Canada goose Cackling goose Brant White-fronted goose Snow goose Blue goose	None observed.				NOTE: Figures shown are merely those for birds observed - areas were not visited frequently enough during this period to accurately list first arrivals, peak concentrations, etc.				
III. <u>Ducks:</u> Mallard Black duck Caddell Baldpate Pintail Green-winged teal Blue-winged teal Cinnamon teal Shoveller Wood duck Redhead Ring-necked duck Canvas-back Scaup Golden-eye Buffle-head Ruddy duck	250 200 100 75 50 50 80 	4/14 4/14 4/14 4/14 4/14 4/14 4/14 							
IV. <u>Coot:</u>									

SUMMARIES

Dates waterfowl counts made _____

Percent of waterfowl area covered _____

Dates brood counts made _____

Percent of area covered in brood counts _____

Total production: _____

Geese _____

Ducks _____

Coots _____

Total waterfowl usage during period _____

Peak waterfowl numbers _____

Areas used by concentrations _____

Principal nesting areas this season _____

Reported by _____

INSTRUCTIONS

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.
- (2) First seen: The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.
- (3) Peak concentration: The greatest number of the species present in a limited interval of time.
- (4) Last seen: The last refuge record for the species during the season concerned in the reporting period.
- (5) Young produced: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (6) Total: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

3-1751
Form NR-1A
(Aug. 1952)

MIGRATORY BIRDS

(Other than Waterfowl)

Refuge Lake Ilo RefugeMonths of January to April 1953

(1) Species	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Inclusive Dates	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Use
I. <u>Water and Marsh Birds:</u>										
Sandhill Crane	8000	3/21	4000	4/5-10	600	4/22				85,000
White Pelican	72	4/21	72	4/20-30	72	4/28				720
Great Blue Heron	None observed.									
II. <u>Shorebirds, Gulls and Terns:</u>										
Killdeer	2	2/11	20	4/20-30						600
Willet	None observed.									
Avocet	None observed.									
Herring Gull	2	3/17	20	4/20-30						20
Ring-billed Gull	20	4/19	20	4/20-30						200
Franklin's Gull	20	3/29	2000	4/20-30						11000

(over)

(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons:</u> Mourning dove White-winged dove	None observed.				
IV. <u>Predaceous Birds:</u> Golden eagle Duck hawk Horned owl Magpie Raven Crow Marsh Hawk Sparrow Hawk Prairie Falcon Am. Rough-Legged Hawk Snowy Owl Bald Eagle	Common None observed. 2 Common 4 1 6 Common 1 Common 1	1/2 4 2000 15 20 4 6 4	1/1-2/30 Common 3/20-4/10 4/1-20 4/10-20 1/1-2/30 4/1-15		6 4 4 20 2000 20 20 6 10 4 1
Reported by <u>Chenley M. Dinkins</u>					

INSTRUCTIONS (See Sec. 7532, Wildlife Refuges Field Manual)

- (1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiformes)
II. Shorebirds, Gulls and Terns (Charadriiformes)
III. Doves and Pigeons (Columbiformes)
IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)
- (2) First Seen: The first migration record for the species for the reporting period.
- (3) Peak Numbers: Estimated number and inclusive dates when peak population of the species occurred.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated species days use (average population X number of days present) of refuge during the reporting period.

3-1752
Form NR-2
(April 1946)

UPLAND GAME BIRDS

1613

Refuge District of Columbia, as listed Months of January to April, 1945

(1) Species	(2) Density	(3) Young Produced	(4) Sex Ratio	(5) Removals	(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'd. Estimated Total	Hunting For Re- stocking For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
<u>LAKE ILO</u>						
Pheasant					75	No winter loss.
Sharp-tailed Grouse					15	
Hungarian Partridge					10	
<u>HIDDENWOOD</u>						
Pheasant					10	Estimated.
Sharp-tailed Grouse					20	
Hungarian Partridge					20	
<u>LAKE PATRICIA</u>						
Pheasant					75	Estimated.
Sharp-tailed Grouse					20	
Hungarian Partridge					20	
<u>LEGION LAKE</u>						
Pheasant					10	
Sharp-tailed Grouse					10	
Hungarian Partridge					20	
<u>McLEAN</u>						
Pheasant					5	Estimated.
Sharp-tailed Grouse					10	
Hungarian Partridge					20	

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

- | | |
|---------------------|--|
| (1) SPECIES: | Use correct common name. |
| (2) DENSITY: | Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks. |
| (3) YOUNG PRODUCED: | Estimated number of young produced, based upon observations and actual counts in representative breeding habitat. |
| (4) SEX RATIO: | This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available. |
| (5) REMOVALS: | Indicate total number in each category removed during the report period. |
| (6) TOTAL: | Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons. |
| (7) REMARKS: | Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested. |

* Only columns applicable to the period covered should be used.

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

- | (1) Species | (2) Density | (3) Young Produced | (4) Sex Ratio |
|---------------------|--|--------------------|---------------|
| (1) SPECIES: | Use correct common name. | | |
| (2) DENSITY: | Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks. | | |
| (3) YOUNG PRODUCED: | Estimated number of young produced, based upon observations and actual counts in representative breeding habitat. | | |
| (4) SEX RATIO: | This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available. | | |
| (5) REMOVALS: | Indicate total number in each category removed during the report period. | | |
| (6) TOTAL: | Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons. | | |
| (7) REMARKS: | Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested. | | |

* Only columns applicable to the period covered should be used.

UPLAND GAME BIRDS

Refuge District IV Reservoirs, as listed Months of January to April, 1945

Form NR-2 - UPLAND GAME BIRDS *

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
<u>Pretty Rock</u>										
Pheasant									75	Estimated.
Sharp-tailed Grouse									10	
Hungarian Partridge									20	
<u>Stewart Lake</u>										
Pheasant									20	Estimated.
Sharp-tailed Grouse									40	
Hungarian Partridge									40	
<u>White Lake</u>										
Pheasant									8	Estimated.
Sharp-tailed Grouse									10	
Hungarian Partridge									10	

* Only columns applicable to the period covered should be used.

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

- | | (1)
Species | (2)
Density | (3)
Young
Produced | (4)
Sex
Ratio |
|---------------------|---|----------------|--------------------------|---------------------|
| (1) SPECIES: | Use correct common name. | | | |
| (2) DENSITY: | <p>Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.</p> | | | |
| (3) YOUNG PRODUCED: | Estimated number of young produced, based upon observations and actual counts in representative breeding habitat. | | | |
| (4) SEX RATIO: | This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available. | | | |
| (5) REMOVALS: | Indicate total number in each category removed during the report period. | | | |
| (6) TOTAL: | Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons. | | | |
| (7) REMARKS: | Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested. | | | |

* Only columns applicable to the period covered should be used.

3-1754
Form NR-4
(June 1945)

SMALL MAMMALS

Refuge District IV Enclosures as listed. Year ending April 30, 1953

(1) Species	(2) Density		(3) Removals					(4) Disposition of Furs					(5) Total Popula- tion	
Common Name	Cover Types & Total	Acres Per Animal	Hunting	Fur Harvest	Predator Control *	For Re- stocking	For Re- search	Share Trapping			Total Refuge Furs Shipped	Furs Donated	Furs Destroyed	
	Acreage of Habitat							Permit Number	Trappers Share	Refuge share				
Muskrat	Lake Ile			45				7-4895	24	22	22			200
Mink				15					8	8	8			16
Coyote				0										0
Skunk				0										12
Badger				0										2
Weasel				1					1					16
House Cat				0										2
Beaver				0										0
Cotton tail Rabbit				0										16
Jack Rabbit				0										6
Raccoon				1					1					2
Muskrat	Hiddenwood							#69						50
Mink								8-1400						10
Coyote														0
Skunk														20
Badger	No report on trapping to date.													4
Weasel														4
Cotton tail Rabbit														20
Jack Rabbit														4
Red Fox														2

List removals by Predator Animal Hunter

* List removals by Predator Animal Hunter

REMARKS:

Reported by Chesley M. Dinkins

INSTRUCTIONS

Form NR-4 - SMALL MAMMALS (Include data on all species of importance in the management program; i. e., muskrats, beaver, coon, mink, coyote. Data on small rodents may be omitted except for estimated total population of each species considered in control operations.)

(1) SPECIES:

Use correct common name. Example: Striped skunk, spotted skunk, short-tailed weasel, gray squirrel, fox squirrel, white-tailed jackrabbit, etc. (Accepted common names in current use are found in the "Field Book of North American Mammals" by H. E. Anthony and the "Manual of the Vertebrate Animals of the Northeastern United States" by David Starr Jordan.)

(2) DENSITY:

Applies particularly to those species considered in removal programs. Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottom land hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.

(3) REMOVALS:

Indicate the total number under each category removed since April 30 of the previous year, including any taken on the refuge by Service Predatory Animal Hunter. Also show any removals not falling under headings listed.

(4) DISPOSITION OF FUR:

On share-trapped furs list the permit number, trapper's share, and refuge share. Indicate the number of pelts shipped to market, including furs taken by Service personnel. Total number of pelts of each species destroyed because of unprimeness or damaged condition, and furs donated to institutions or other agencies should be shown in the column provided.

(5) TOTAL POPULATION:

Estimated total population of each species reported on as of April 30.

REMARKS:

Indicate inventory method(s) used, size of sample area(s), introductions, and any other pertinent information not specifically requested.

3-1754
Form NR-4
(June 1945)

SMALL MAMMALS

Refuge District IV Encasements as listed: Year ending April 30, 1953

(1) Species	(2) Density	(3) Removals						(4) Disposition of Furs					(5) Total Popula- tion	
Common Name	Cover Types & Total Acreage of Habitat	Acres Per Animal	Hunting	Fur Harvest	Predator Control *	For Re- stocking	For Re- search	Share Trapping			Total Refuge Furs Shipped	Furs Donated	Furs Destroyed	
								Permit Number	Trappers Share	Refuge share				
Muskrat	Legion Lake							472	All					20
Mink				4				3-1400	"					6
Skunk														10
Weasel														10
House Cat														4
Badger														2
Cotton tail Rabbit														10
Jack Rabbit														8
Muskrat	McLean			30				470	All					100
Mink				1				71						6
Skunk								3-1400						6
Badger														2
Weasel														6
Jack Rabbit														8

* List removals by Predator Animal Hunter

* List removals by Predator Animal Hunter

REMARKS:

Reported by Chesley M. Dinkins

INSTRUCTIONS

Form NR-4 - SMALL MAMMALS (Include data on all species of importance in the management program; i. e., muskrats, beaver, coon, mink, coyote. Data on small rodents may be omitted except for estimated total population of each species considered in control operations.)

(1) SPECIES:

Use correct common name. Example: Striped skunk, spotted skunk, short-tailed weasel, gray squirrel, fox squirrel, white-tailed jackrabbit, etc. (Accepted common names in current use are found in the "Field Book of North American Mammals" by H. E. Anthony and the "Manual of the Vertebrate Animals of the Northeastern United States" by David Starr Jordan.)

(2) DENSITY:

Applies particularly to those species considered in removal programs. Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottom land hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.

(3) REMOVALS:

Indicate the total number under each category removed since April 30 of the previous year, including any taken on the refuge by Service Predatory Animal Hunter. Also show any removals not falling under headings listed.

(4) DISPOSITION OF FUR:

On share-trapped furs list the permit number, trapper's share, and refuge share. Indicate the number of pelts shipped to market, including furs taken by Service personnel. Total number of pelts of each species destroyed because of unprimeness or damaged condition, and furs donated to institutions or other agencies should be shown in the column provided.

(5) TOTAL POPULATION:

Estimated total population of each species reported on as of April 30.

REMARKS:

Indicate inventory method(s) used, size of sample area(s), introductions, and any other pertinent information not specifically requested.

116007

3-1754
Form NR-4
(June 1945)

SMALL MAMMALS

Refuge District IV Easements as listed: Year ending April 30, 1953

(1) Species	(2) Density	(3) Removals	(4) Disposition of Furs							(5) Total Popula- tion				
Common Name	Cover Types & Total Acreage of Habitat	Acres Per Animal	Hunting	Fur Harvest	Predator Control	For Re- stocking	For Re- search	Share Trapping			Total Refuge Furs Shipped	Furs Donated	Furs Destroyed	
								Permit Number	Trappers Share	Refuge share				
Muskrat	Pretty Rock			120				473 - 74	120					300
Mink				4				3-1400	4					10
Weasel	No report but estimated			2					2					10
Badger	number taken.													4
Jack Rabbit														20
Skunk														10
Muskrat	Stewart Lake							457-88						20
Mink				4				3-1400	4					10
Skunk	No report but estimated													12
Weasel	number taken.													4
Jack Rabbit														20
Coyote														2
Muskrat	White Lake							456						10
Mink								3-1400						2
Skunk	None taken.													10
Weasel														4
Jack Rabbit														20

* List removals by Predator Animal Hunter

* List removals by Predator Animal Hunter

REMARKS:

Reported by

Chealey M. Dinkins

INSTRUCTIONS

Form NR-4 - SMALL MAMMALS (Include data on all species of importance in the management program; i. e., muskrats, beaver, coon, mink, coyote. Data on small rodents may be omitted except for estimated total population of each species considered in control operations.)

(2)	(1) SPECIES:	Disposition of Fur	Density	Removals	Disposition of Fur	Density	Removals	Disposition of Fur	Density	Removals	Disposition of Fur	Density	Removals	Disposition of Fur	Density	Removals	Disposition of Fur	Density	Removals	Disposition of Fur	Density	Removals	Disposition of Fur	Density	Removals
(1)	SPECIES:																								
(2)	DENSITY:																								
(3)	REMOVALS:																								
(4)	DISPOSITION OF FUR:																								
(5)	TOTAL POPULATION:																								
	REMARKS:																								

REFUGE GRAIN REPORT

Refuge Lake IloMonths of January through April, 1953

(1) VARIETY*	(2) ON HAND BEGINNING OF PERIOD	(3) RECEIVED DURING PERIOD	(4) TOTAL	(5) GRAIN DISPOSED OF				(6) ON HAND END OF PERIOD	(7) PROPOSED OR SUITABLE USE*		
				Transferred	Seeded	Fed	Total		Seed	Feed	Surplus
Wheat	75	--	75	--	--	30	30	45	--	45	--
Barley	30	--	30	--	--	10	10	20	--	20	--
Spelts & Wheat (Mixed)	191	--	191	--	--	10	10	181	--	181	--

(8) Indicate shipping or collection points _____

(9) Grain is stored at Lake Ilo granary.

(10) Remarks _____

*See instructions on back.

REFUGE GRAIN REPORT

This report should cover all grain on hand, received, or disposed of, during the period covered by this narrative report.

Report all grain in bushels. For the purpose of this report the following approximate weights of grain shall be considered equivalent to a bushel: Corn (shelled)—55 lb., corn (ear)—70 lb., wheat—60 lb., barley—50 lb., rye—55 lb., oats—30 lb., soy beans—60 lb., millet—50 lb., cowpeas—60 lb., and mixed—50 lb. In computing volume of granaries, multiply the cubic contents (cu. ft.) by 0.8 bushels.

- (1) List each type of grain separately and specifically, as flint corn, yellow dent corn, square deal hybrid corn, garnet wheat, red May wheat, durum wheat, spring wheat, proso millet, combine milo, new era cowpeas, mikado soy beans, etc. Mere listing as corn, wheat, and soybeans will not suffice, as specific details are necessary in considering transfer of seed supplies to other refuges. Include only domestic grains; aquatic and other seeds will be listed on NR-9.
- (3) Report all grain received during period from all sources, such as transfer, share cropping, or harvest from food patches.
- (4) A total of columns 2 and 3.
- (6) Column 4 less column 5.
- (7) This is a proposed break-down by varieties of grain listed in column 6. Indicate if grain is suitable for seeding new crops.
- (8) Nearest railroad station for shipping and receiving.
- (9) Where stored on refuge: "Headquarters granary," etc.
- (10) Indicate here the source of grain shipped in, destination of grain transferred, data on condition of grain, unusual uses proposed.